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THE GENESEE FARMER.

SATURDAY, JUNE 9, 1838.

Effect of Natural Causes on the Agriculture of England and the United States

The question has been, not unfrequently, asked, how far are farmers in the United States justified in following the example and practices of British Agriculturists? This question assumes an importance it would not otherwise possess, were it not a fact, that we look with great interest to the results of agriculture in that country; that most of our standard agricultural works are from that side of the Atlantic; that the wealth and resources of England are such as to render that island a great theatre of experiments; and, that the arts and the sciences which can be brought to bear on the cultivation of the soil, are far more extensively diffused and better understood there than here. Having the same Anglo Saxon descent, the influence of England is felt in every department of our social condition; in our religion, literature and law; and perhaps is as potent as any where, in the usages and practices that belong to the cultivation of the earth. In our implements used on the farm, we copy from English models; in improving our breeds of horses, sheep, and cattle, we look to stock imported from England; in our horticulture and floriculture we follow the example of English planters and gardeners; and in our farming operations, in culture, and in selection of grains, the influence of that country is paramount. It is necessary then to inquire how far we may safely follow such an example, and in what respects we ought to deviate, or when it becomes necessary to do so.

To determine this question correctly, it is necessary to take into consid ration the position of the two countries, so far as regards climate, soil, and population, and their influence on plants, and the prices of labor. In general it may be laid down as a correct position that the difference between the soils of the two countries is not of a kind to render any difference of culture important. The analysis of soils effected by Sir Humphrey Davy; the geological structure of the British Islands; and the extensive and minute reports made on the soils in the agricultural surveys of the several counties, show that there is no essential difference between the composition of the greater part of the British soils and ours. Peat and bog soil alone, is found more extensively diffused than with us; but this has but little influence on the general progress or course of agriculture.

Population, by justifying or rather compelling English farmers to adopt peculiar systems of farming, may be said to create a wider difference between the agriculture of the two countries than any arising from the soil. Owing to what may be termed an immense surplus population, the price of labor is reduced to the lowest possible rate at which bare subsistence can be procured, and in consequence many methods of farming are there adopted, which could not, at the prices of labor and products, be otherwise than ruinous here. For instance weeding wheat and other kinds of grain is a very common practice there, and multitudes of women and children earn their bread for a considerable part of the season in this manner. It is clear that this operation cannot be introduced among our farmers, though its effects in keeping the soil clean, and in increasing the amount of the crop must be evident. Another consequence too of the cheapness of labor, is, that many operations are performed by hand, and at a far greater expence of time, than are accomplished by the aid of implements here, and in one fourth of the time. This no one can doubt who is in the habit of employing on the same farm English and American laborers; and of which an illustration is given by Mr. Bement in his history of the culture of the ruta baga in the Cultivator for January, 1838.

But it is to the climate, that the principal points of difference in the agriculture of the two countries must be traced; and this is the thing that should be kept most distinctly in view, when comparisons between English agriculture and our own are instituted. England, though in the latitude of Quebec, has a milder climate than our middle states, and this fact should not be lost sight of in adapting the agriculture of that country to this. In the United States,—we speak particularly now of the northern and middle states—as it is these that are more influenced by English agriculture than the south,—the summers are much hotter and the winters much colder than in England; hence some plants that require a great degree of heat will succeed better here than there; while many plants will bear the winters of England in the open air, that perish when exposed without protection to the intense cold of our winter months. A great number of thermometrical observations show that the average temperature of the three months of January, February, and March, in England, is about 37°, 42°, and 47°, and that of the three months of June, July, and August to be about 63°, 66°, and 65°. The average difference between the highest and the lowest temperature per month will not exceed more than 6 or 8 degrees, those sudden and extreme changes to which our climate is subject being unknown there. In the valley of the Genesee, near the Ontario, the average for the three winter months gives about 24°, 26°, and 36°, and the three summer months an average of 71°, 73°, and 72°. The mean average of several years is 49°, and the range of the thermometer about 100°. In this country we have changes of from 30° to 40° in twenty four hours; there the greatest rarely exceeds six or eight. The thermometer range in the United States is more than 120°,—in England not more than 45°. There the thermometer rarely descends but a few degrees below the freezing point; here it is below for weeks or months. Indeed it is probable that in the colder parts of the United States, the thermometer falls below 0°. as often as in England it does below 32°.

This statement will show that there must be a material difference between the agricultural operations proper to two countries so situated, so far as those operations can be affected by climate. To give one instance;—Indian corn it is ascertained cannot be grown in any country where the thermometer for more than one month is not above 70°, and that in a temperature of 75° or 80° it arrives at its greatest perfection. This is the reason, why, notwithstanding all the efforts made to introduce corn into Great Britain, it has proved a complete failure. It is not killed with the frost there as here, but the degree of heat will not bring it to maturity during the summer months. Cobbett was confident he should succeed, and did grow some tolerable crops of early Canadian, but like some trees which flourish and mature their seeds here, but will not ripen in England the corn would not in all cases mature so as to vegetate, and spite of his boastings, he was compelled to abandon the culture. On the contrary wheat is a crop that requires a lower temperature than maize, and is not adapted to a hot dry climate. Great Britain is therefore one of the best wheat countries on the globe, and perhaps produces in proportion to the land in tillage a greater amount than any other. The low temperature and moist climate of England is found to agree with this plant perfectly. Scotland is too cold; but no part of the Island is too hot, as is the case with no inconsiderable portion of our southern States.

In another important respect the climate of the two countries exercises a decided influence, and that is the planting and growth of timber or ornamental trees. Mr. Prince of the Linnean Garden at Flushing, remarks on the acclimation of trees, "that the *deciduous* trees of Portugal, Italy, and Spain; and of South Carolina, Georgia, and Louisania, will endure the winters of New-York, when the *evergreens* from the same places perish if unprotected. Though in England where the winters are moderate these survive and flourish, while from the want of heat in their summers, many of the deciduous trees do not ripen their wood sufficiently to support their climate in winter; whereas beneath the powerful sun of our country, the wood becomes so well matured, that it, in many instances, resists the rigor of our winters uninjured. A consideration of these circumstances, and effects of climate, may greatly aid those concerned in the acclimation of trees." In the work on Planting published in London, speaking of American forest trees, the following remarks are made. "But the oaks of North America, claim the deepest attention of the ornamental planter. Ranging through many degrees of latitude, and growing at different elevations, consequently under much variety of climate, some of them are hardy with us, some tender, but all abhorrent of wet or clayey soils. Deprived of the cloudless sun, and high temperature of an American summer and autumn, they cannot ripen their shoots sufficiently to be frost proof except in warm places and soils of a light nature."

As an instance of the effect of climate on trees we may mention the *Platanus occidentalis*, the common Sycamore, or Button wood, of our forest; a tree which every one knows fringes the margin of most of our streams, and rears its majectic trunks in the rich alluvion of all parts of our country, one of the hardiest and most rapid growing forest trees of the northern states; yet of this tree, the work on planting to which we have referred says, "that it has proved incompetent to withstand the spring frosts, sunless summers, and clouded autumns of England. About twenty years ago a great proportion of the individuals in England, without respect to age or bulk, were killed outright by a spring frost. Since then we have seen them repeatedly injured, and, when half recovered by the operation of a summer of more than average warmth, again replunged into the same state of debility."

To this difference in climate must be attributed the difficulty we have found in the United States of growing hedges from such shrubs or trees as are used in England for this purpose. From witnessing their excellent effect, and beautiful appearance there, it was perfectly natural that we should adopt the same plants for the same purpose here, but after the repeated and persevering efforts of fifty years, it may be questioned whether there are five miles of tolerable hedge from imported varieties of thorn or holly plants, in the United States. The difference between the moist, temperate, and equable climate of England, and the hot, dry, variable climate of this country seems to have been overlooked; when a recollection of this fact would have convinced any one acquainted with the physiology of plants, that our seasons must be fatal to English hedges. Whether there are any of our native plants that will supply this desideratum, remains to be seen.

Not immediately connected with agriculture, but still closely associated with its prosperity, is the effect of climate on roads. In England all the principal roads are Mcadamized or covered with a thin layer of finely broken stone, that uniting by its own angles forms a pavement of rock impervious to water and smooth as a floor. Vast sums of money and labor have been spent in this country in attempting to give some of our principal roads such a surface, but mostly without success. The frosts of our winters penetrate below any coat of metal that can be applied, and the lifting and heaving thus produced will break up and destroy the pavement annually. There

can be no doubt that more labor and stone broken, has been applied on the Seneca turnpike between Utica and Canandaigua, than on any similar road in England; yet while one is as smooth as if composed of solid rock, the other for some months in the year is almost impassable. This is owing to the greater intensity of our frost; and in constructing our roads, by overlooking this difference of climate, or not properly guarding against it by deep and effective draining, we have followed a system not adapted to our country. Against this additional difficulty our lines of rail road must contend, and any system of construction that shall place them beyond the action of frost, will be a national benefit.

The worst effect which our variable climate and intense cold, has on our agriculture, when compared with that of England, is its influence on our wheat crop. Such a thing as winter killed wheat is scarcely known in that country; while in many parts of this, especially where clay predominates, wheat in all seasons is more or less liable to injury, and in some years has more than two thirds perished. The heaving out of the roots of wheat and clover plants by the expansion of frost, and which is here the most fatal in the spring of the year when it thaws the surface by day and freezes it by night, is something which agriculturists in that country are rarely called to guard against, and which of course never enters into their calculations in the preparation of their soil. Here it is advisable in all cases to guard against the evil, by such a system of ploughing and manuring as shall most effectually obviate the danger arising from this source.

In reading or adopting the modes of English farmers in the preparation and application of manure, the influence of climate should not be forgotten. If any thing has been established by agricultural chemistry, it is that all manure loses in value exactly in proportion as the fermentation and decomposition goes on in the open air, by which most of the volatile and finer parts of the manure is lost to plants. In a high temperature, such as our summers possess, yard or stable manure, will ferment rapidly, and if left as it generally is, exposed to the rain and sun, its value and efficiency is much lessened. If piled in large masses, as is practiced by some farmers, and then allowed to stand through the summer, a custom followed to some extent in England, it must be remembered that fermentation and decomposition goes on here with a rapidity unknown there, a fact depending on the greater heat of our summers, and hence the more necessity of guarding against the loss of the fertilizing gases thus liberated. The proper place for the decomposition of manure is beneath the surface of the earth; but where it is desirable as it sometimes may be to keep it over the summer for fall application, the manure should be piled in layers alternating with earth, (and if this is partially combined with lime so much the better) which will absorb the volatile salts and parts thrown off by the decomposition and fermentation which in our climate must take place, and the quantity and quality of the manure will be greatly increased, over what it would be if left to ferment in the yard, or heaped, but uncovered with earth.

It appears then, that in things relating to the soil alone, its preparation or amelioration, the application of animal or mineral manures, or the artificial arrangement of crops, American farmers may with safety copy the example of British farmers, and derive important advantage from the perusal of English works on agriculture. So they in general may, in all things relating to the preservation of crops from insects or diseases, such as the grub, cutworm, blight, mildew, wheatworm, &c. as these are common to both countries, and the balance of experience is altogether in favor of Europe. In every thing relating to wheat they are entitled to a hearing above all other men; as in no country is the culture of that valuable grain carried on so successfully; and this is owing in a great measure to the skill and science that has been brought to bear on the production of that crop. In raising cattle, and the common and improved breeds of middling fine wooled sheep, English farmers are exceeded by none, and on all these topics they may be considered as qualified to instruct us. Fine wooled sheep, however, notwithstanding the pains taken with them have never succeeded in England. The imported merinoes from Spain and Saxony have deteriorated and wasted away; and their place with the English farmer is supplied by the harder and heavier Leicester and South Down. The immense quantities of fine wools used in the English factories, are imported from Germany, France, and Spain; and hence in the management and growth of the finewooled breeds of sheep, we have little to learn from them. There is no doubt that the production of fine wool is at the present moment far better understood in the northern states than in England, and there are more Saxon and Merino sheep in Vermont and Newhampshire, than in the three kingdoms.

But it is mainly on those points of agriculture, where cheapness of labor, and the influence of climate can be brought to bear, that we find British agriculture to cease from being suitable models for us, and are thrown on our own resources of observation and comparison. Because corn cannot be grown in England is no reason why the farmers of the United States should not plant; and on the other hand, because the whin and the holly make a durable and beautiful fence in England, it furnishes no conclusive proof that such results would ensue in our country. English farmers use little or no precaution against the winter killing of wheat, or the destruction of roads by frost; but here such precautions are essentially necessary, and based on reasons, respecting which the English farmer knows nothing from experience, and therefore must be illy qualified to instruct.

A comparison of English experience in farming, with our, in some respects, ruder methods of proceeding must be always advantageous, as suggesting hints for improvement, and enabling us to correct errors into which, for want of such experience, we are prone to fall. But to infer that any course, would as a whole, be successful here, simply because it has proved so there, would imply an ignorance of the causes that are operating to produce great differences in the methods of culture there and here, which should not exist; causes which may be traced to the powerful, but too frequently overlooked operations of temperature and climate, and which are therefore ever acting and permanent.

Turnep Drills.

The expense or difficulty of procuring good drilling machines, induces many to sow their turneps broadcast, and thus in some degree to diminish the crop, by the want of evenness or regularity which attends broadcast sowing. Others, with considerable labor, drill all their turneps by hand, without the assistance of a machine. In this case, the most tedious part of the operation is dropping the seeds evenly. Where hand drilling becomes necessary, this part of the work may be greatly facilitated by a method described in a former volume of the Genesee Farmer. A hole is made in the bottom of a tin cup, of just such size as to allow the seeds to pass freely through when it is shaken; this cup is fastened to the lower end of a wooden rod about two and a half feet long which serves as a handle, and the operator passes along the drill with an even pace, shaking the cup constantly and thus dropping the seeds evenly and expeditiously. The disadvantages are, that it is requisite to draw a furrow previously, and afterwards to cover with a hoe. If the land is well prepared, several furrows may be drawn at once by means of a horse attached to an instrument for the purpose, somewhat resembling a large heavy rake head, with short blunt teeth. The teeth of a cultivator, inserted into such an instrument, are still better. In this way a man may plant from one quarter to one half an acre a day, the quantity varying with the distance of the drills from each. But with a good drilling machine, he may sow and cover the seeds equally well with one tenth of the time and labor.

Many entirely neglect the culture of turneps from the difficulty of procuring suitable drills; and on the other hand, this difficulty is owing in a great measure to the very limited extent to which they have been cultivated. Attention has not been sufficiently directed to their construction. Nearly all the patent machines which have hitherto been offered for sale, without possessing any very decided and exclusive advantage, or any thing truly valuable but what was known long ago, have been offered at unreasonably high prices. It is true there is always an advantage in purchasing implements and machines ready made, as when made by the quantity they can be furnished much cheaper; but a turnep drill, sufficiently good, need not in any case to cost more than two or three dollars. A good mechanic can easily make one for this sum. To enable the farmer if necessary to contrive and construct one for himself or under his own direction, the following imperfect suggestions are furnished.

Drills, for sowing turneps, are driven by the hand, and sow one row at a time. They resemble in form a light wheelbarrow, being pushed before the operator. As but little strength is required, and as lightness is indispensible to ease in working, the circumference of the wheel may be of stiff hoop iron merely, and kept to its circular shape by the usual number of spokes from the centre. The contrivance for dropping and covering formerly consisted of three parts, one for ploughing the furrow, a second for dropping, and a thrid for covering the seed. These parts are kept separate in some drills now constructed. But the most simple contrivance is where these three parts are united. This is effected by making the dropper, or hollow wooden piece through which the seed descends to the earth, similar in shape to the coulter of a plough. Two or three inches of the lower extremity runs in the earth, and is cased with sheet iron, so as to be more easily pushed forward through the soil. This, being open at the bottom and behind for an inch or two upwards, suffers the seed to pass freely out, below the surface of the earth, and as soon as the dropper passes the earth falls upon the seed and covers it. The depth of planting is regulated by the operator by means of the handles of the drill. Most drills both in England and in this country are now constructed with these three parts thus combined.

A contrivance for more completely covering the seed consists in adding several short chains to the drill, which by dragging after it upon the seed, effectually rake them in. Unlike a toothed harrow, these chains do not become obstructed by sticks, straw, &c.

In most drills, the dropper immediately follows the wheel; but in some it precedes it, the wheel being made broad serves as a roller to press the soil upon the newly sown seed.

The chief difference in drills, that which constitutes the chief variation in the different patents, and which is still least perfected, is the contrivance for dropping the seeds evenly from the hopper. In one of the simplest, the vessel for holding the seed, is a short cylinder with a horizontal axis, made of sheet tin, and with a number of holes in its circumference for the seed to pass through; this cylinder is kept constantly revolving by the motion of the drill. An improvement in this, consists in making the seed box of the shape of a very short cylinder terminated at each end by a cone; and the dropping part consists of a separate ring or short open cylinder of tin, sliding closely on the cylindrical part of the seed box. Several rings, with holes of different sizes, for different kinds of seeds, may be thus used on the same machine. Rotary motion is given to this cylinder in two ways. In one the machine has two wheels, the seed box being placed on the axle between them and revolving with them. This is recommended for its great simplicity. In the other, a strap passes from a small wheel on the axle of the main wheel, to another wheel on the axle of the seed box. The motion of the seed box may be increased or diminished by varying the size of the strap wheels. This contrivance is well adapted to sowing all kinds of round smooth seeds, as turneps, peas, &c.

In another contrivance, a circular brush, kept constantly revolving, sweeps against the seed holes, and keeps them from becoming clogged by driving the seed through. In Robbin's planting machine, this principle is modified by substituting a snapping wire spring for the brush. This is adapted to irregularly shaped seeds, as mangel

wurtzel and corn. But it is liable to get out of order. A simple and certain method of throwing out these seeds evenly, is yet a desideratum. J. J. T.

PRUNING TREES.

A most injudicious system with regard to pruning trees appears to have been adopted by many of our farmers. A tree is neglected until it is comparatively old, and the top a dense mass of brush rather than properly directed branches, and then is attacked by the farmer with axe and saw, and nearly all the top cut off at a single operation. In the first place trees ought never to be left so long without pruning, where it is ever to be expected or required. The pruning should be made annually, and keep pace with their growth. In this way such ruinous loppings off of wood will be prevented, and the injuries that result from such a course be avoided.

When a fruit tree has grown with a thick bushy top, the bark of the central branches is tender, and when suddenly exposed to cold winds or hot suns, the effect cannot be otherwise than prejudicial. If the pruning is performed gradually, or annually, the bark is alike adapted to resist the influence of the seasons, and is not apt to become thick and tight, or tender and cracked. Perhaps the peach suffers more from injudicious pruning than almost any other tree; and where any considerable part of the top is cut off at once, it is most usually fatal. A mode which has been adopted to a considerable extent in the peach growing districts of New Jersey obviates in a great measure this difficulty, and also another serious one, the danger of the branches breaking when heavily laden with fruit. After the tree is planted where it is to grow, it is allowed to stand till it becomes well rooted when it is cut off near the ground. Sprouts immediately spring up around the root, and of these five or six of the best situated ones are selected to remain, and the rest are carefully eradicated. These shoots are either budded, or suffered to grow up the natural fruit, according to the pleasure of the proprietor. The advantages derived from this course are these; these offshoots spread more laterally than would branches from a single trunk, and of course the sun acts upon every part of the branches more fully; and when they are loaded with fruit, they will fall to the ground in every direction, rendering the gathering of the fruit easy, and preventing the breaking down of the tree.

The experience of the best fruit growers of the country, as well as the deductions of philosophy, would seem to point out the summer as the most suitable time to prune trees, as the material for covering the wounds is already elaborated, and will be immediately applied by the remaining branches. Professed nurserymen are more careful in this respect them the common farmer; pruning is by them carried on upon more of a system, and hence trees managed by them rarely are called to undergo such amputations of the top, as those where less attention is given them, and perhaps no pruning attempted. Much of the excellence of fruit, and the productiveness of the tree is depending on pruning, and by commencing early, and following up a system carefully, such a shape may be given to the crown, and such a direction to the main branches as most effectually to secure the advantages of sun and air.

BUTA BAGA.

The value of this excellent root is rapidly becoming properly appreciated among farmers, and though the feeding out the roots is attended with some trouble, (the only objection we have heard made to them,) the advantages of their culture is so decided, that we may expect few farmers will be willing to forego them. That they can be fed out to any animal, or in any way, without some profit, we do not apprehend; and our experience would go to corroborate the many testimonies we have published from various sources of their excellence, and the ease with which, under ordinary favorable circumstances, they can be cultivated. In feeding them to animals, the least favorable results have been obtained when given in a raw state to swine. In this respect, however, they have not greatly differed from raw potatoes; either of which fed in this state to pigs seeming to be of little value. The value of potatoes, as every one knows, is nearly or quite doubled by cooking, and some experiments would seem to indicate that a similar result is effected on the turnep by the same means.

Mr. Mayleet, near Montrose, Pa., who last year raised turneps at the rate of 1333 bushels per acre, boiled the roots, and with the addition of some coarse grain provender, fattened his pork upon them. The pork, he says, was excellent.

Mr. Bement of Albany, well known for his successful endeavors to introduce superior animals of different breeds to the farming community, particularly the Berkshire pigs, kept twenty of these hogs, mostly full grown, on six bushels of ruta baga and one bushel of buckwheat bran, a day, for the whole, divided into three meals, two fed raw and one boiled. Fed in this way for three and a half months of last winter, they were found to thrive as well as when fed on four quarts of corn, each, per day; which at the prices of grain at that time, would give a value of 28½ cents per bushel to the ruta baga.

Mr. Mather of Scaghticoke, a farmer of system and enterprise, instituted an experiment in feeding cattle with turneps, to test their value in comparison with other kinds of food, and the result, as communicated to the Cultivator, was as follows:

"I fed two yoke of cattle on turneps for two months—November and December; feed, five bushels a day a yoke. Average gain 115 lbs. a yoke per month. The same cattle were fed through the month of January on potatoes and meal, corn and oats, ground together in equal quantities; feed, 2 bushels of potatoes, one bushel of meal. Gain 60 lbs. a yoke. Estimate the value of the ruta baga by the price of corn, oats and potatoes, and the respective gains, and it makes the ruta baga worth but a fraction less than 48 cents per bushel."

For feeding or fattening pigs, we should, at present, prefer cooked potatoes to turneps; but when it is remembered, that on an average, three times as many turneps as potatoes can be grown on an acre, the latter, when cooked, may be found the most valuable in the end, and experiments in the case of swine, are needed to settle this point. As food for cattle or sheep, the turnep is superior to the potatoe; and for making fine beef or mutton, the ruta baga has scarce a rival. We, in this country, are yearly becoming greater imitators of the English, in substituting beef and mutton for pork; a fact we attribute to two causes;—the partial failure of the corn crop, without which it is generally considered impossible to make first rate pork,—and the increased culture of the ruta baga, which has produced beef and mutton of unexceptionable quality.

SINGULAR CASE.

We think there are few instances on record in which the conservative powers of life are more strongly exhibited, than in the following, which was communicated to us a few days since by the individual who witnessed the fact.

A farmer had a sow that was delivered of four or five good pigs in the spring of the year, but though there were evidently more, and her efforts were violent, all was in vain, and the owner considering her fate certain, and unwilling to kill her, left her to her fate. To his surprise she lived; was in a few days about the pen; and though for a month or two subject at times to severe efforts apparently at parturition, these at last disappeared, and she improved in flesh rapidly.

She was fattened in the fall, and did as well, and weighed as much, as any of the other sows fed with her, and no idea was entertained that any trace of the former difficulty remained. When butchered, however, our informant was present, and saw taken from the vaginal canal or uterus, a mass, that on examination proved to be formed of the bones of the pigs that had been retained eight months before. Our informant counted four sculls, and there appeared the proportionate number of the harder bones present, all excepting these having of course disappeared.

In such a case as this, what would be the chance of success from what is called the 'Cesarian operation,' or a delivery of the young through the integuments of the belly? Such an operation has been successfully performed on a cow, though it would probably be fatal in far the greatest number of cases. Would not the attempt be admissible, where there was a prospect of relief in no other way?

EARLY CORN.

The following notice which we copy from a letter of G. M. Hatch, Esq. of Dutchess, to G. C. Thorburn of New-York, is inserted, because it corroborates the favorable opinion we have expressed respecting this variety of corn; and because we wish to impress upon the mind of the farmer the advantage of obtaining seeds from a northern latitude, where early ripening is desirable. That the Canada corn will, with the same treatment, yield as much as the Dutton, cannot reasonably be expected; but the yield obtained by Mr. Hatch and others, is such as to be amply remunerative, and from the short time required in ripening, is far more certain.

"The Canada corn which I now send you, I have raised for two years past with great success, averaging 70 bushels to the acre. We last year fell short of supplying the demand, by several hundred bushels. I received the seed originally from Montreal—planted it on the 1st of June, the ears were hard on the 24th of August, but thoroughly ripe for seed by the 10th of September, and this too on ordinary ground. The great advantage from planting the Canada corn, independent of its excellence as an early variety, is, we are enabled to plant the rows one *foot nearer*, each way. Also, the stalks will necessarily have from two to four ears on each;—besides it is a heavier corn, weighing seven pounds and some ounces per bushel more than the Dutton corn."

Necessity of Draining Land.

Scarcely a day passes in which we do not hear complaints from our farming friends that much of the spring grain, such as wheat, barley, &c. is rotting in the ground. This is particularly the case in those districts where the soil is rather shallow and the subsoil retentive. Two causes have contributed to this result, (one of which notwithstanding the fears of many we think is overrated) the very low temperature of the month of April, and the heavy rains of the forepart of May. That seeds will rot when exposed to the united action of such causes is certain; but where the soil is dry, if the temperature should be low, seeds rarely perish. On the contrary there are few kinds of grain, that, when deposited in earth flooded with water, let the temperature of the air be what it may, are not more or less liable to injury. Water standing on soils, either before or after the seed has germinated, is fatal to the hopes of the farmer, and one of his first operations should be to prevent the possibility of such a result.

Under draining is in all cases where practicable to be preferred, as drying the earth to a greater depth, and leaving the surface free for cultivation; but where the nature of the gound, or the expense to be incurred prevent such draining, means adequate to free in all events the surface from submersion must be adopted. Where the surface soil is inclining to be spongy, unless means are taken to carry off the water as it falls, it is speedily converted into mire, and seeds sown must either rot, or when the water is carried off by evaporation and the slow process of absorption, the surface settles down, bakes, and becomes so hard that the young and tender plants with great difficulty force their way through to the influence of air and light.

On all soils therefore where too much wetness is to be apprehended, and this is always the case where the soil is shallow and a tenacious subsoil, furrow draining is indispensable. The furrows made after the seed is sown, in a field, should always be in proportion to the liability of the field to suffer from moisture. There should always be enough of them to carry off the water quickly, not allowing it to remain to saturate the earth, carry off the nutritive soluble matter of the soil, and render it impermeable to the air. The soil must be light and friable if we would have a vigorous vegetation, but no land where the surface is liable to be saturated with water for weeks can possess these qualities. The water must be conducted off or attempts at cropping are worse than useless, as they destroy the land without any corresponding equivalent. Never then let the plough leave the field after the seed is put in, until the requisite surface drains are opened, and if heavy rains fall before the germination of the seeds, let the farmer look well to his drains and see that no obstruction prevents the free discharge of water. Nothing so effectually aids in elevating the temperature of soils, and promoting rapid vegetation as draining; since until the surface is dry, all the heat that should combine with the soil, is carried off in the evaporation of the water, and a cold, dead, inert surface, is the natural result.

The Geological Reports.

T. A. Conrad, formerly Geologist of the Third District, has been appointed Palæontolegist, and his exclusive duty is to execute that part of the work which relates to *fossil remains*. Much of his Report is occupied with lists of the names of such shells as are found in our rocks, amongst which are 23 newly discovered species. For this task he appears to be "peculiarly fitted."

It would be difficult to select a single paragraph of this Report adapted to the taste of general readers, but we can make briefer extracts which will be interesting.

"In the earlier eras of our planet, the temperature was uniform and the seas comparatively very shallow.——We find the flora of the Carboniferous era to have been every where nearly the same.——Would we not [then] expect to find all the organic remains of such periods to consist chiefly of one group of species over the whole globe? Are not rocks of the Oölitic group in South America, the Cretaceous, and even the Eocene of North America, mere extensions of European systems, deposited in seas of the same periods, and containing the same groups of shells? Deeper oceans, and greater variation of temperature, have cast more uncertainty over the upper Tertiary formations; but the Transition affords us the converse of this proposition: greater uniformity of temperature, a more perfect identity of organic remains, and rock masses of more uniform character. That the seas of one of these ancient eras was shallow, is proved not only by its universality, but by the *ripple marks* and fucoides which every where pervade the strata."——

We have seen *ripple marks* on sand underlying the limestone on the south side of the Erie Canal near the west bank of Eighteen-mile Creek, about six or seven miles east of Lockport. It resembled the wavy surface of sand in very shallow water when it has been ruffled by the wind.

——"Dr. *Buckland* has shown how admirably the complicated chambers and the exterior surface of the Ammonites were constructed to resist the pressure of deep water. But shells of this genus were not created until more profound seas had resulted from changes in the configuration of the earth's surface, subsequent to the deposition of the Coal formations.——

——"There is reason to believe that the Brachiopods of the Transition, so different from the prevailing form of the superior strata which constitutes the genus Terebratula, were, unlike the latter, denizens of very shoal water. Immense numbers lived and were entombed with the remains of terrestrial plants on the margins of islands in the Carboniferous epoch. The bituminous shale of the coal measures, is in some places stored with a species of *Producta* with long filiform spines, all the specimens having the two valves in their natural position, and the spines broken off from the shells simply by pressure of the superincumbent strata. They were never subjected to the action of a stormy surf, and yet land plants grew in the vicinity of the living shells; hence we infer a quiescent state of the waters around the islands of the Transition eras.——

——"We have an additional argument in favor of the universal nature of ancient formations, and the contemporaneous deposition of our coal strata with those of Europe This correspondence Professor Eaton has inferred from the identity of the fossil flora, but the proof does not end here. While the same kind of plants flourished upon the islands where now are the continents of Europe and America, the same species of shells existed in the waters which girded them. Thus in the ironstone layers beneath the coal of Tioga county, the common European bivalve *Producta scabricula* abounds just as it does at Coalbrookdale in the same rock."

He then names 11 species of shells which are identified with those of Europe.

The investigations of *W. W. Mather*, of the first Geological District, are of great importance to that part of the state.

Under the head of PEAT he says,

"This alluvian is the result of vegetable decomposition. It varies in its aspect. The best quality is a soft, unctuous, tremulous mud when wet; but *when dry is so compact as to receive a slight polish*. When heated, it burns with flame and a bituminous odor. Ligneous, fibrous, and compact peat, are the principal varieties.—The *two former* are of comparatively *little value*. The latter is extensively used in France and Ireland, and is considered a valuable fuel. It is not only used for *domestic purposes*, but also in *burning lime, bricks and pottery*. In cold climates it is formed in moist ground and shallow ponds, wherever there is an accumulation of vegetable matter. Decayed trees form a light, soft, spongy mass called *ligneous peat*—from decomposed grasses and weeds, a *fibrous peat* is formed, which is light and spongy several feet below the surface, but at a greater depth it may be of a good quality for fuel—small aquatic plants and mosses, such as the Sphagnum palustre, produce peat which at a moderate depth is *compact*, without fibres, uniform in its texture, and of good quality."

An extensive marsh of peat and of fine quality, near the road from Williamsburgh to Jamaica, (L. I.) he estimates at 30,000 cords; but the quantities in the swamps of Dutchess and Columbia counties, at 3,000,000 cords; and says, it ought to be worth at least one dollar a cord in the swamp, where wood is worth $3. He advises the owners of quagmires and quaking meadows to examine them; and referring to specimens collected during the survey of last season, he says, "some of them, now when dry, are compact enough to receive *a slight polish*, and have *as great a specific gravity as bituminous* coal, and would probably *give out as much heat*."

After describing Kidd's Rock, a remarkable erratic block which was embedded in the loam of the Tertiary formation on Long Island, Professor M. says,

"Several companies of diggers for Kidd's money have expended much time and labor at this place. Mr. Mason relates many amusing anecdotes relative to their mode of operating, and the ceremonies practiced, some of which are sacrilegious. The superstitions connected with these gold hunters are a rarity of this enlightened age. I presume I speak within bounds when I remark, that in examining the Geology of Long Island, I have seen many hundreds of excavations *on the east side* of the boulders and erratic blocks, where the gold hunters have dug for this pirate's money."

We have seen an excavation near the Seneca River above Cross Lake said to have been made by diggers after Kidd's money; and not a few excavations in Monroe county. What induced the Captain to hide his money in our western wilderness? The ignorance of these folks must be deplorably profound.

"On most of the farms in the interior [of Long Island] artificial means are resorted to, to procure a supply of water for cattle and other farm stock. A basin-shaped excavation is made in the soil, and puddled with clay, and into this the surface waters are conducted during rains. They are called watering holes, and are a striking feature of the farming economy of the island."

One error into which the learned Professor has fallen at page 141, we must take the liberty to correct. Limestone containing magnesia is a valuable manure when properly applied; and to this very admixture, the farms in the southeastern parts of Pennsylvania chiefly owe their permanent improvement. According to *Cooper*,* "many of the primitive limestones of [that state] contain about 14 per cent of magnesia"; but in this matter we do not trust alone to chemical analysis: we have seen the ground on which lime had been deposited in large heaps for slacking, utterly steril for a long time; yet one hundred bushels to the acre of such lime, has been safely and most advantageously applied to meadows or pastures. We consider this mineral as the great basis of good husbandry, and regret that any discouragement from its general use, should be thrown in the way of the farmer.

"Fresh water shell marl," says Prof. M. "is very abundant in Columbia and Dutchess counties. It is formed by molu-cous animals secreting lime from the waters of the lakes and ponds in which they live, to form their shells; and as generation succeeds generation, the dead shells accumulate, and form thick and extensive beds of white shell marl. When the pond or lake has shoaled to within a few feet of the usual water level, plants grow and decay, and by accumulation form peat, which in marshes that were once ponds, covers the marl. For a foot or two from the surface of the marl, the peat is filled with small fresh water shells, similar to those which have crumbled down to form the proper marl. The pure marl is a white crumbly mass when dry, but unctuous and plastic when wet, and contains a few small white fresh water shells. If vinegar, or any acid be poured on it, it effervesces or boils up strongly."——

"The value of fresh water shell marl is well known to our intelligent farmers; but few know it when they see it, and still fewer know in what situations to seek it. It performs the same office on the land as air slacked lime, and is as valuable a manure, while it has no causticity to injure vegetation. One object in burning lime for land is, to reduce it to the state of powder by slacking. The shell marl is always in a pulverulent state, and only requires to be dug from the ponds and swamps and spread on the land."

* Cleaveland's Mineralogy.

He mentions numerous localities of shell marl in Columbia and Dutchess counties, and estimates the probable aggregate at 2,625,000 loads, each of which he says ought to be worth at least a dollar for manure. But he adds, "it is supposed that the above localities do not embrace one half of the quantity of shell marl" in those counties.

Shell marl also occurs in many of the swamps in Western New-York, but the greatest deposit is in the Cayuga Marshes—enough to supply a great extent of country. The same deposit extends upwards into the Cayuga Lake; and the posts of *The Bridge* were driven into marl of an unknown depth. This substance was used by the first settlers for white washing.

Tufaceous marl also occurs in Western New-York, especially in that part occupied by the limestone formation. Springs charged with carbonic acid, dissolve both the oxide of iron and carbonate of lime which they find in their way to the surface, and there deposit them, often forming mounds of considerable magnitude. This marl when not too compact, would be of great value to the farmer. In some localities the lime appears to be very pure.

The extracts which follow, are of great practical importance. In some parts of Western New-York, lime is sold by the quantity at 20 cents a bushel; and if under the present system, it cannot be afforded cheaper, a different method of burning ought to be adopted. This subject deserves to be thoroughly investigated by businessmen.

"The lime kilns at Barnegat [Dutchess co.] are *kept burning constantly*, from the opening of the river in the spring until the closing of it in winter, *without allowing them to cool*. The method pursued here is, after the kiln is once kindled, to charge about half a ton of anthracite coal broken to the egg-size, then 300 to 350 bushels of limestone in lumps of 20 to 30 pounds each, and at the end of 12 hours another charge of coal and limestone, and so on until the kiln is filled. They then draw out about 350 bushels of lime from the bottom, and introduce another charge of coal and limestone, and every 12 hours this process is repeated. This operation is continued for months, as in a high furnace for smelting iron. A great economy is thus introduced,* the kiln being always kept heated, and the caloric which would escape in the common mode of manufacture, is here expended in heating other portions of limestone, and preparing it for the high temperature necessary to expel the carbonic acid. *About 700 bushels of lime are thus obtained daily from each kiln*, with a consumption of a little less than a ton of coal.

"Coal is delivered at the kiln at $6 per ton, so that the expense of fuel is *less than one cent per bushel*, and that of attending the kilns does not exceed one cent more, and the expense of raising and carting the stone is very trifling.

"*Lime is sold on the wharf at 6¼ cents per bushel*, and vessels are always waiting for their cargoes, and take the lime as fast as it is burned." T.

Former prices in the West.

Nothing can more fully illustrate the advantages of ample means of communication to any country, than the comparison of the prices of grain in the western states before and since the construction of the canals. The following is from the Chillicothe Gazette of January 1826. "For the benefit of those who desire to profit by cheap living, we may state, that in this town three dollars will buy twelve bushels of wheat, forty-eight bushels of corn, or one hundred and fifty pounds of beef or pork."

To Preserve Currants.

Gather them when green and separate them from the stems—then put them into junk bottles, cork the bottles closely and put them in a cool part of the cellar. Currants may be kept fresh and green in this manner a year, and will make excellent pies in the winter and spring.

* "The relative economy introduced by this method of burning, may be calculated from the fact, that in Connecticut, where lime is burnt with wood, and *the kilns allowed to cool* between each burning, 35 cords of wood are employed to burn 700 bushels at Brookfield, and 40 cords to burn 1200 bushels at Reading. Allowing wood to be worth $2,50 per cord, the expense of fuel for burning is 12½ cents per bushel in the first, and 8½ cents in the second case. The perpetual kilns of Pennsylvania yield 700 bushels of lime for every 8 cords of wood, and one and a half tons of anthracite consumed. In New-York 2000 bushels of lime are burnt with 12 cords of wood."

Good Butter.

The county in which your useful paper is published, and where it so widely circulates, is deservedly celebrated for making good butter, consequently the process must necessarily be well understood. The knowledge, however, required for the proper management of a dairy appears to be very limited. The object of this communication is to call the attention of those who possess experience on that important subject, and endeavor to elicit from them such information on the art of butter making, as may be useful to the community. There is perhaps no branch of agriculture, particularly in the neighborhood of large cities, that is so profitable and that requires so much attention, as the butter dairy. Much information is wanted respecting various objects connected with it.

First. The pasture, fodder, and other food of cows, best calculated to produce the most milk, yielding the greatest quantity of cream.

Secondly. The best situation for keeping milk the proper temperature, and the form of vessels required to obtain the most cream.

Thirdly. The state of the milk when it is necessary that it should be skimmed off, or the cream removed from its surface.

Fourthly. The form of the vessel for keeping cream, and the temperature at which it should be kept until it is in a state to yield the greatest quantity and the best butter.

Fifthly. The state of acidity and temperature of the cream to obtain butter in the shortest time by churning.

Sixthly. The reasons why so, if it is more difficult to obtain butter from cream by churning in the winter than there is in the summer, and how the difficulty of churning is to be overcome.

Seventhly. The best mode of working or purifying and freeing it from the butter-milk, so as to obtain the best flavor, and to prevent its rancidity.

Practical answer to these queries would be of vast importance to the agriculturist, and to the community.—*Delaware County Republican.*

Stall Feeding Cattle.

Mr. Editor—Whilst I appreciate your Cabinet as the vehicle of valuable information for farmers, I cannot but fear it has a tendency to mislead some in their estimates of the profits of agriculture generally. There are, undoubtedly, some choice spots of ground, very productive, and profitable to their owners; of which, we do not fail being told, through the medium of agricultural publications, and, in some instances, the accounts are greatly exaggerated. There are very many farmers in Chester county, which, by the by, is one of the most fertile in our state, who barely receive reasonable remuneration for their labor,—who, if they would give us a correct detail of their farming operations, would present quite a different picture when contrasted with those before mentioned.

The profits of agriculture will be found to be very moderate, if the estimate be made for five or ten years together.

In a former number of the Cabinet I gave a hint that I might give some account of stall feeding cattle; I shall only make a statement of facts, as they occurred with me, and shall be obliged to any more experienced feeder, if he will show me, wherein I could have done better (with the single exception of having sold my cattle off the grass, which in that instance, I think, would have been the more profitable.)

I ascertained that two yokes of oxen would sell for two hundred dollars, if sold off the grass; this I considered a fair price, but, being disposed to stall feed for more profit, I had them put in the stalls about the first of November, 1836, and sold them about the middle of February, following, when beef was selling "high" in market. I sold them at 9 cents per lb. with the allowance of 60 lbs. to the 100, for beef—which is about the same as 5½ cts., on the live weight—my account is as follows:

Dr.

4 Cattle worth	$200 00
5½ Tons or hay at 12 00	66 00
102 Bus. of corn at 90	91 80
28 " of oats at 45.	12 60
	370 40
Interest on the above, for 3½ mos.	6 24
	$376 64

Cr.

4 Cattle sold for	$300 00
Manure, exclusive of the littering	15 00
	315 00
Loss	61 64
	$376 64

The grain was measured carefully—the hay was estimated by taking portions out of the racks, at different times, and weighing them. Upon an average, they had, each 28 lbs. per day. I have no doubt of its being pretty nearly correct; therefore, it appears that I have lost nearly the amount of the hay by stall feeding the cattle; which verified the truth of the saying, "you need not expect to get any thing for your hay."

Beef is now lower in price than it was this time last year, and grain could have been sold since harvest at the high prices—what will the profit be this winter? Farmers, keep good accounts, and let us hear through the medium of the Cabinet.

I should be very happy in communicating any knowledge that I possess, relative to farming or stock, were I persuaded, that in so doing, I would confer any thing useful on the farming community—but, unfortunately, many of us are quite deficient in that kind of knowledge which would tend to profit, did we but posses it. In this as in other things, let us "go ahead." Intelligence is as useful, and, very probably, as powerful as money.

Patent scales are being erected in different parts of our country; these will afford to farmers, the means of ascertaining the weight of their cattle when fatted—much is lost to the unskilful farmer by the erroneous estimate of the weight of his cattle, sometimes owing to the bad judgment, but more generally, the duplicity, of the broker with whom he deals. Very superior cattle, weighing alive over 2000 lbs. may probably, neat 70 lbs. to the 100; but such cattle as are more commonly sold, of which many are oxen, weighing from 1200 to 2000 lbs. alive, from the best information I have, I would say, 60 lbs. to the 100 is a pretty fair allowance; if not altogether as fat as they should be, perhaps, they would lose nearly one-half. I have not tried hogs very extensively, but found six shoats, eight months old, to weigh, alive 1285 lbs. with ordinary treatment; when killed and dressed, they weighed about 1000 lbs. losing rather more than one-fifth—one weighing alive 165 lbs.—weighed 130 lbs. when dressed. There may be some profit with hogs, provided you can have the pigs early in the spring, and market them early in the ensuing fall, but, I have doubts of their being profitable when kept over winter, excepting for breeders. Hogs of 18 months, rarely weigh over 350 lbs., with the ordinary treatment—and I cannot persuade myself to believe that "3½ lbs. of corn meal, made into mush, will make a pound of pork."

I have found it better to sell pork at the usual killing time, than to salt it, and sell it in bacon—it loses considerably in the drying.

I had two hogs set apart and weighed, after they were killed and dressed—they weighed jointly 659 lbs. After salting and drying in the usual manner, they made as follows:

Hams	127 lbs.
Shoulder	116 "
Flitch	95 "
Chines	45 "
Jowl	28 "
Total	411

2 shoulders before salting 64 lbs., when dried 57 lbs.; 1 ham, 35 lbs. when dried 31½ lbs.—*Farmers' Cabinet.*

Chester county, Feb. 11, 1838.

Stall Feeding Cattle.

The following communication was read before the Philadelphia Society for Promoting Agriculture, at its regular monthly meeting, April 18, and ordered to be published in the Farmers' Cabinet:

To the Philadelphia Society for Promoting Agriculture.

Believing that the cause of agriculture may be promoted by practical observations and statistical facts, and that theories and principles should be based on these, I beg leave to communicate a statement regarding four bullocks which I have had the pleasure of bringing to a high degree of perfection. One of these steers was admitted to be one of the fattest ever exhibited in the Philadelphia market, and the others very little inferior to him. By the annexed statement it will be seen that the result, of between two and three years stall feeding, has been to pay me full prices for the grain, beets and hay consumed, and allow the manure for straw and labor, a result that I think would satisfy any reasonable farmer or grazier.

At the same time to succeed well with feeding large cattle, it is necessary, that they should be kind and good feeders. They should also be attended with especial care. Without these pre-requisites the farmer had better sell his grain than stall feed cattle. Isaac W. Roberts.

L. Merion township, Mont. Co., Pa., April 17, 1838.

Statement to 1st May, 1836.

Nov. 15, 1835, bought two steers, estimated at 1750 lbs. dead weight—cost	$110,00
Commenced stall feeding them on the 1st December, and continued 150 days at 27 quarts per day, or 126 bushels, at 70 cents,	88,20
They consumed two tons of hay, at $16,	32,00
The grain consisted of equal parts of corn and oats, ground; or corn and "mill stuff," or wheat bran. On the 1st of May, 1836, turned them on grass with a pair of oxen, estimated weight 1850 lbs. and valued at	230,20
	$150,00

Statement from 1st May, 1836.

Cost as above of the four cattle,	$380,20
Pasture during the season for the four,	80,00
Commenced feeding grain on the 1st of October, twice a day, till 1st December, and then three times per day till 1st May, 1837, equal to 190 days full feeding of two bushels per day, or 380 bushels as above, at 70 cents,	266,00
100 bushels Mangel Wurtzel Beets at 25 cents,	25,00
5 tons Hay at $16,	80,00
	$831,00
Grass during the summer of 1837,	80,00
Commenced feeding grain on 1st Sept., 1837, twice a day till 1st Dec., and then three times per day till 19th Feb.; say 140 days full feeding, or 280 bushels at 70 cents,	196,00
100 bushels Mangel Wurtzel, at 25 cents,	25,00
3½ tons Hay, at $12,	42,00
	$1174,20

On the 19th of February, 1838, sold them to Messrs. Drum, Wartman & Co., Victualers, for $1200. In the spring of 1836, the two steers would have sold for $240, and in the spring of 1837, I estimated them at current market price as worth $750, and if then sold there would have been an apparent loss, but it should be remarked in explanation, that the stall feeding extends to the first of May, whereas the season for selling is the middle of February to 1st of March, when their cost was about what I estimated them as worth to the butcher.

Recapitulation.

First cost of the four cattle,	$260,00
Pasture during two seasons,	160,00
Grain fed to them, 786 bushels at 70 cents,	550,20
Mangel Wurtzel, 200 bushels at 25 cents,	50,00
7 tons of Hay, at $16,	112,00
3½ tons of Hay, at $12,	42,00
	$1174,20

And being sold for $1200 gives, as before stated, the manure for straw and labor, leaving a balance of $26 and paying me a liberal price for the produce of the farm; about two-thirds of the grain consisted of equal measure of corn and oats, and one-third was corn and mill feed.

By the foregoing statement it appears that the average increase in value of each animal was about $100 per annum.

Statement of Weight and Girth.

STEERS.

Live weight.	Dead weight.	Girth.
No. 1.—2422 lbs.	1671 lbs.	9 ft. 1 in.
" 2.—2324 "	1613½ "	8 " 9½ "

OXEN.

No. 3.—2555 lbs.	1691 lbs.	9 ft. 2½ in.
" 4.—2261 "	1533½ "	8 " 9 "

From the Farmers' Cabinet.

What will an Acre of Land Produce?

In 1822, I enclosed an acre of land in the vicinity of Wilmington for the purpose of trying this experiment. I erected upon the ground a small house, and leased it to a gardener to work for one half the produce. The ground was enclosed in such a manner as to leave an exact acre under cultivation. It was at first ploughed deep, the stones all carefully pitched off, then highly manured, and afterwards worked the first five years with the spade. I furnished the gardener with about forty dollars worth of manure annually, and sent a man, horse and cart, twice a week to draw the produce to market. Every means was used to raise the amount of sales to the highest point; seeds of the choicest kinds of vegetables were procured, forcing beds erected, and the produce ripened early and sold in the market at a high price.

The average produce of my share for the first five years, was $174,20 per annum, consequently, the whole amount produced by this acre of land was not less than $348,40 per annum, besides the vegetables used in the gardener's family.

The gardener and his little family, consisting of three persons, had other perquisites, by which they obtained about $100 annually, in addition to their share of the garden; by which they were enabled to live in comfort, and could have indulged occasionally in some of the luxuries of life if they had chosen so to do. But like most other workers of the soil in this country, they wanted more land, and till it with a plough and a horse.

In order to gratify this disposition, I enclosed them another acre, and lent them a horse, plough, and occasionally a man to work it, and continued the same outlayings for manure as in the former case.

The consequence of this change was, that I received less per annum for the second five years than the first.

The family now became dissatisfied with their situation, nothing would do but more land; they complained of their labor being increased, and their income diminish-

ed; they had sometimes to hire and they had no money to pay the laborer; they had many other difficulties to encounter, all of which were ascribed to the smallness of their farm. I was now as much dissatisfied as they were, for we could not agree about the cause of our unsuccessful efforts; but as no other way opened at the time, I enclosed about two acres more for a third five years experiment, which terminated in my receiving less income than in the second five years, and not much over one half the amount of the first five. So much for increasing the size of farms without being "kind to the soil."

The result of these experiments correspond with all the known facts that have come under my observation for the last thirty years upon the subject of the profits of capital expended in agricultural pursuits.

I at first adopted the opinion that the secret of gathering money out of the soil lay in small farms, but extended observation of facts and mature deliberation has changed this conclusion. I now believe the quantity of land has nothing to do with the profits of the capital expended; that it altogether depends upon a judicious selection of soil, the facilities of obtaining manure, and the proper application of it as food for plants, and most of all upon the quantity of the best and most nourishing kinds of manure; upon this mainly depends the profits of capital expended for agricultural purposes.

I found $5000 expended upon 100 acres of poor land in the neighborhood of Wilmington, would not produce, after paying all expenses, more than 5 per cent. upon the capital, but by doubling the amount in expenses for manure, and making the sum laid out $10,000, it would more easily nett $1,200 per annum; that is, the profits of the capital laid out in land produced an interest of 5 per cent. per annum, and the capital laid out in manure produced 20 per cent.

The simple fact of the vast difference between the profits of capital expended in land, and in the improvements explains the diversity of opinion that exists upon the profits of agriculture, and a knowledge of this fact is in my opinion of incalculable advantage to the community. If the above hasty sketch should elicit the spirit of inquiry, and put into operation some practical experiments among the readers of the Cabinet, it will amply satisfy a

Wilmington, 4 *mo.* 28, 1838. SUBSCRIBER.

From the Farmers' Cabinet.

On Stall Feeding Sheep.

MR. EDITOR:—At a late quarterly meeting of the "Agricultural Society of New Castle county, Delaware," it was requested of the Corresponding Secretary to elicit from *practical farmers* throughout the state, such information and experience on matters connected with *agriculture*, as might benefit and advance the objects of the society, and when deemed of sufficient interest and importance, to publish the same for the use of its members. Many of them are subscribers to your valuable paper, and most of them interested more or less in sheep. The method Mr. Baynes adopts of making *fat mutton* will, no doubt, be interesting to some of them, and the information he imparts may be relied upon—founded as it is upon *experience*.

Yours, very respectfully,

JAMES W. THOMSON.

—

CORRESPONDENCE, &C.

Wilmington, March, 1838.

MR. THOMAS BAYNES—Dear Sir—I am induced from some practical remarks made by you in a late conversation on the subject of *sheep*, and particularly *sheep for stall-feeding*,—to solicit from you still further information on this important branch of grazing—not only for the benefit of our Delaware farmers (who in the prospect of a dog-law, for the protection of sheep, from the next legislature, will go much more largely into the business) but also for the sake of the agricultural interest of the country in general. In all our great markets, *fine mutton* is scarce, and consequently high—it is one of our most *wholesome* meats and if properly attended to, one of the most *profitable* the farmer can raise. But unfortunately for agriculture, the great and leading avocation of man,—too few of its practical votaries impart their wisdom and experience to others by essays and lectures, who so much need their direction and aid. The experience you acquired in England, and the years of observation you have had in this country as the shepherd of that celebrated feeder of fine mutton, Samuel West, of Delaware county, Pa., will give great interest to any communications from you on the subject—and as Mr. Barney has given a reputation to Delaware *sheep*, which they richly deserve—as among the finest in the country—practical directions from you, for their treatment, and how they can be best improved and stall-fed, will be thankfully received by those who wish to emulate his example—and profit by his valuable enterprise. Below, I have proposed some queries for you to answer at your leisure, on the interesting subject of *feeding sheep*,—without a wish however to confine you to them. Any other information than they ask for, and in your power, I feel assured you will impart and by so doing, much oblige yours, &c.

JAMES W. THOMSON,
Cor. Sec. Agricultural Society.

Wilmington, April, 1838.

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TO JAMES W. THOMSON, M. D.—Esteemed Friend—Thy favor on the subject of sheep was duly received, and I will comply with thy request with pleasure as far as I am able. Samuel West, to whom thee has alluded, a practical farmer near Chester, Pa., feeds about 100 sheep per year—he purchases them in September, and, if possible, selects a mixed breed of Bakewell & Merino, or glade sheep. After getting them home, the first thing he does is to wash them in a clear stream of water to cleanse them from dust or mud which they may have collected in traveling. They are then turned into a pasture pretty well eaten down for a few days, when they are changed to a better one. It is best to change their pasture every week, particularly, if the fields are small. They will do pretty well on grass till December, when they should be housed (see directions in answer to thy 4th question.) The cost of sheep for feeding is generally from $3 to $5 per head, and will mostly sell for double the first cost when fat.

John B. Baynes, of Naaman's Creek, Delaware, keeps a *breeding stock*, the fine quality of which thee has some knowledge. He allows thirty ewes to one buck, which is considered about the right number on a farm of one hundred acres—these ewes on an average will have forty lambs, which at 4 months old are worth four dollars per head. But I should recommend the yearlings kept over which would shear seven pounds of wool on the 40 head—equal to 280 lbs. at 40 cents would be, $112,00
The 31 head of old sheep would shear 5 lbs. wool per head, 155 at 40 cents, 62,00
40 lambs, when fat, at 2 years old—$12 per head, 480,00
$654,00

The food will cost $1 per head on the 40 yearlings, 40,00
Leaving, 614,00

The farmers' income from his *breeding flock*.

Ewes should be kept well through September and October, and the buck allowed to go with them on the first of October; after this time it is considered best not to keep them too high till towards March when they should be kept better. Potatoes or turneps should be given them till grass comes. Sheep should be washed about the middle of May, if the weather is clear, shear them ten days after. Some of our farmers may not be prepared to purchase a flock of Bakewell sheep. A profitable business can be done, and at the same time a good stock raised by purchasing a few good common ewes and a Bakewell buck—it will greatly improve the breed by changing the buck every year and selling off the old ewes. In three years the breed will be very nearly as good as full Bakewell. If two farmers in the same neighborhood could exchange bucks it would answer as well and be a saving to both parties. I have endeavored to give thee all the information in this and my answers to thy queries below I now think of, yet that I have omitted some things I have no doubt, but am willing at any future time to answer any questions and impart any knowledge in my power to aid thee and the valuable Agricultural Society of the county, whose advancement thee so ardently seeks to further. I remain thy friend,

THOMAS BAYNES.

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Queries, by James W. Thomson, the Corresponding Secretary, of the Agricultural Society of New-Castle County, Delaware,—with Answers by Thomas Baynes of Wilmington, on the management and feeding of sheep.

Question 1.—What breed of sheep do you consider best, and most profitable for the feeding of mutton, in this and the adjoining States, to purchase, principally for the purpose of fattening?

Answer.—Half Bakewell and half Merino. A breed of sheep from the Glade country, State of New-York, answers very well.

Q. 2.—What kind of sheep would best combine the fattening qualities, and yield to the farmer the most valuable fleece?

A.—*Bakewell*, viz:—Lambs at six months old, worth from four to six dollars, at 14 months, yield six to eight pounds of wool, worth 40 cts. per pound; at 24 months will sell for ten to thirteen dollars; if not sold, will produce from five to six pounds of wool, and have a lamb—continuing thus, till four years old, mostly decreasing in the weight of wool every year; at four, the fleece will not weigh more than four pounds, when they ought to be fed, and never kept older. It is a rule with good farmers, never to have their lambs before first week in March.

Q. 3.—What should be the age of sheep to fatten best, and how is a farmer to know their age, and what length of time does it ordinarily take to make mutton sufficiently good for the shambles?

A—From three to five years old. Their age is known by their teeth. At one year old they have two broad teeth in front; at two years old four, and at three years old six, or a full mouth; after this age their teeth begin to shorten.

They require three months to fatten, provided they are in fair order when purchased. Six weeks on grass, and six weeks on grain and hay.

Q. 4.—What do you consider the best food for stall feeding sheep, and how much food should be given to each sheep daily during the fattening process.

A.—Corn, oats and potatoes, with hay. It is necessary to be cautious at the commencement; the food should be three-fifths corn, to begin with half pint to each sheep daily for five days, increasing gradually to one pint for five days, more, and one and a half pints for five days after, when one quart can be given with safety. It is best to give a few potatoes daily, say two bushels to every hundred head.

Q. 5.—Is salt essential to sheep at this time?

A.—They ought to have it to go to at pleasure.

Q. 6.—How many sheep, with advantage to the farmer and their health, can be fed on a farm of from 100 to 300 acres, and how many can one hand feed and fodder?

A.—One hundred is considered a sufficient number for a farm of 200 acres, to be fed in three seperate flocks. In England one sheep to every head of cattle is the rule. The labor is very trifling, one hand can attend 100 in 1¼ hours—¼ hour morning, noon and night. Be *punctual to the time of feeding, it is of importance.*

Q. 7.—Should fattening sheep be kept housed or suffered to run at large, and whether it is necessary to have any particular form for shelters, racks, or enclosures, for fattening sheep?

A.—Every farmer should have at least one sheep-house, to be two stories high; the upper story for hay in part, and to prepare their food in the lower story, open to the south, with a yard attached to it twice as large as the house, or to contain twice as much ground as the house stands on. The rack and trough to run around the inside on the lower floor, four feet from the outside wall, to allow a passage; a small trough to be placed at the bottom of the rack, six inches broad and four inches deep, two feet from the floor. The racks must be perpendicular, to prevent the hay seeds getting into the wool, and slope the back of the rack; two feet will be sufficient for the height of the rack from the trough. The hay is given them from the passage over the back of rack, but the food must be taken inside and carefully placed in the trough, even all along to prevent any one from getting more than his share. It is necessary they have water, twice every day. If they go out to water never allow them to be out more than two hours at a time. The pen should be kept well littered.

Q. 8.—What are the diseases to which fattening sheep are most liable, and what are the proper remedies?

A.—The disease most common is rot or lax—the best remedy known for it is half pint of equal proportions of soot and salt. When sheep are feeding high they are subject to a disease supposed to be a species of cholic, the best remedy is to bleed at the eye vein, and give an injection is very good when they are too costive, but this never occurs when they have their proportion of potatoes, turneps or sugar beets.

When sheep get torn with dogs, or by any accident rend the skin, the wound should be well washed with warm milk and water.—Stich up the place and bathe it with tincture of Cayenne pepper or spirits of turpentine.

Sheep are at times subject to foot rot or foul claw; this can be mostly cured by placing in their path *quick lime* three inches deep, so that the lime will go well up between their hoofs. If this should fail, clean well their feet with a dry cloth, pare of the superfluous hoof, and apply butter of antimony; if it is still unmanageable they had best at once be sold, and then if care is not taken to clean well their pen, &c., the next flock will take it as a contagious disease. Scab is a disease more common in Scotland and north latitutudes; it is scarcely known in this country. The best remedy for it, is the oil of tar, placed in the wool on the back; a small quantity is sufficient. THOS. BAYNES.

Use of Swamp Muck.

MR. HOLMES—I have noticed in the 44th number of the present volume of the Maine Farmer, that a friend wishes to know whether muck which is composed of decayed leaves, roots and other vegetable matters, will do as a dressing for land without being previously mingled with animal manure?

As I have used much of the muck in years past, I will try and answer "from actual experience." I hauled direct from the swamp, one winter, about 200 loads upon a piece of land of different qualities, varying from a muck, or dark black soil, to an open, porous, gravelly elevation. On the black soil, it has done nothing—the soil natural-

ly abounded in muck. But on the gravelly elevation it has done much to enrich the soil. Its benefits vary much on different soils. I should not put it on wet land in any case—it is labor thown away, without it is mixed with animal manure; and in that case, the manure will do as well without the muck.

I should be in favor of laying the muck in the barn or hog yard for a season, for the purpose of destroying the weeds and seeds with which it abounds. I have found when I have hauled muck direct from the swamp on my lands, that I have introduced many of the wild grasses and weeds that are hard to be subdued.

In conversation with one of my neighbors—a farmer who has had some experience in muck—he told me that when he commenced operations on the farm on which he now lives, that he ploughed a light dry piece of ground in the fall of the year; and being short of manure, he hauled what he had on half of the piece, and then went to the meadow and hauled muck on the other half, and in the spring following planted the piece to corn. He further says, that that part of the piece that was dressed with muck, produced as good corn, and little the best wheat; and held out as well for grass, as that dressed with the manure from the barn.

I will make an extract from an article in the 8th vol. of the N. E. Farmer, (signed W. H., Catskill, N. Y., 1830,) page 27. The writer says, "Last fall I carted several loads of muck on a knoll of loam, and put it in one heap, though I think it would have been better to have dropped one load only in a place—(I think so, too.) In the spring, prior to planting corn, the muck was spread and ploughed under. The crop of corn, where the muck was spread, was large—I thought larger than where barnyard manure was put. A neighboring farmer has made use of muck for several years. The first year he thought it equal to barnyard manure, and its effects were perceivable a much longer time. The soil on which the muck was put, was a warm gravelly loam.

The muck was used by another neighboring farmer, for manuring corn in the hill, in the following manner:—A row of each, alternately,—one of muck, one of barn yard manure, and one of hog manure. He assured me the corn was much the best manured with the muck. The soil a sandy loam."

THO. PIERCE.

Readfield, Jan. 1838. [*Maine Farmer.*

From the Franklin Farmer.

The Principles of Breeding Cattle.

No. 2.—The comparative influence of the Sire and Dam.

If the preceding number established the principle that *like produces like*, it is obvious that the farmer who has a good stock of cattle to breed from will rear good stock, and improve them; but if he has a bad stock to start from, the produce will be indifferent, and will grow worse. How obviously important is it then that his stock, both male and female, should be of the best quality which he can possibly obtain.

"The question as to the comparative influence of the sire and dam is a difficult one to decide. That farmer will not err who applies the grand principle of breeding equally to them both. In the present system of breeding, most importance, (and that very justly,) is attributed to the male. He is the more important animal on account of the more numerous progeny that is to spring from him, and thus his greater general influence; and therefore superior care should be bestowed on the first selection of him for rearing. He should, if possible, always be in point of blood, of a superior degree to the stock to which he is to be bred; and besides, the farmer should study him closely, and be assured that he possesses, in more than an unusual degree, the characteristic excellencies of the breed which it is wished to impart to his stock.

When this case, as to the possession of such combination of good points has extended from sire to son through several successive generations, it may readily be supposed that he will possess them in a higher degree than the female can. They will be made, as it were, a part and portion of his constitution, and he will acquire the power, of more certainly, and to a greater extent communicating them to his offspring.

In this way the influence of the sire, may in well bred animals, be considered as superior to that of the female; but her's is always great, and must not be forgotten. In Arabia where the mare is the object of chief attention, and her good qualities are carefully studied and systematically bred in her, the influence of the female decidedly preponderates; and on the same principle that of the highly bred cow will preponderate over that of the half bred bull. Her excellencies are an hereditary and essential part of her, and more likely to be communicated to her offspring, than those which have been only lately and accidentally acquired by the bull with no pedigree, or with many a bolt in it. Custom and convenience however induce the generality of breeders to look most to the male.

The question whether the sire or dam has the more influence in controlling the sex of the offspring, is perhaps not less difficult of decision. Cows generally breed males and females alternately; but their habit in this particular is not so uniform as to contravene a principle which has lately been promulgated chiefly by French writers on breeding. One of them mentions a great number of cases which establish satisfactorily the principle, that *the animal which is in the greatest vigor*, (health, age, constitution and flesh being considered,) *at the time of commerce* will generally fashion the sex. For example, an old and declining cow is bred to a young and vigorous bull, other things being equal, the produce will be male, because the bull was in the greatest vigor.

These principles lead to the statement of another, which is equally as important and if possible better established, and perhaps less understood. If a man has a superior milch cow and wishes to raise milking stock from her; the common plan is to save her heifer calves. But according to a principle of breeding, sustained by facts as well as theory, by far the better plan would be, to save a bull calf from this cow, and his stock when he is put to breeding will have the excellent quality of his dam, and be, like her, superior milkers. For example, Cleopatra was an extraordinary milker, according to this principle her heifer calves may, or may not, make good milkers; but her bull calf Frederick, having her charter and qualities bred in him will communicate them to his stock; and his heifer calves will be, like his dam, superior milkers.

This last principle suggests an important consideration in selecting a breeding bull, viz: that he be descended from a superior milch cow.

The next number will contain a few remarks on the principle of breeding in and in. R. W. S

No. 3.—Breeding in and in.

The judicious breeder will not too long confine himself to his own stock, unless it be very large. The breeding from too close affinities,—the breeding *in and in* as it is called, though it has many advantages, to a certain extent, in the hands of most skilful and judicious breeders; though it may be pursued until the excellent form and quality of a breed is developed and established, and was the source whence sprung the superior cattle and sheep of Bakewell, and to some extent of the superior Short Horns of Mr. Colling; yet, to it, also must be traced the speedy degeneracy—the absolute disappearance of the New Leicester cattle, and, in the hands of many an agriculturist, the impairment of the constitution of the New Leicester sheep.

Bakewell was a master spirit in breeding, and it cannot be denied, produced a breed of cattle worthy the efforts of such a skilful agriculturist. The principle on which he seemed to act was novel, bold, and for a time a successful one. Some of his cattle were extraordinary illustrations of the harmlessness of such a system, but he had a large stock on which to work, a veil of mystery was thrown over the most of his proceedings, and no one knew his occasional deviations from this rule, nor his skilful interposition of remoter affinities, when he saw, or apprehended danger.

But what has now become of the New Leicester or Bakewell cattle? where are they to be found? It was a bold and successful experiment, and seemed for a while to answer the most sanguine expectations of that skilful and spirited breeder.

In districts, in which experiments were carried on, it established a breed of cattle equalled by few; and it enabled the Long Horns to contend, and often successfully, with the heaviest and best of the middle horns. But no sooner had the master spirits of the day disappeared, than the character of the breed began imperceptibly to change. It had acquired a delicacy of constitution inconsistent with common management and keep; and it began slowly but undeniably to deteriorate. Many of them had been bred to a degree of refinement, that the propagation of the species was not always certain. The breed itself gradually diminished, in some places it almost disappeared. The reader may scarcely give credit to the assertion, but it is strictly true, that in 1833 there was not a single improved Leicester on the Dishley farm; nor a dozen within the circuit of as many miles. It would seem as if some strange convulsion of nature, or some murderous pestilence, had suddenly swept away the whole of this valuable breed.

The above remarks are in substance taken from that valuable treaties on British cattle, before alluded to. In Kentucky, though the principle of breeding *in and in* has met with general disapprobation, yet, it has been more or less praticed by many breeders. To one of whom allusion will be made, not from unkindness, but merely for example, for he like Mr. Bakewell of England, is a monument to illustrate the impropriety of the practice. This breeder, (now less notorious) had, several years since, one of the finest herds of milking and breeding blooded cattle in Kentucky, and deservedly had high reputation as a breeder. But vainly imagining that they were far superior to all others, proper crossing was neglected; the stock began to diminish in size; many of them became hornless; and their constitutions were impaired, in consequence of which they suffered more from cold in winter and were more liable to disease, in summer; the murrain soon got among them, and played such sad havoc in one short season, that at present, only a few venerable animals remain of that once superior but ill-fated herd.

With this short digression we will again quote our valuable author. "It has therefore become a kind of principle with the agriculturist to affect a change in his stock every second or third year; and that change is most conveniently effected by introducing a new bull. This bull should be as nearly as possible of the same sort; coming from a similar pasturage and climate; but possessing no relationship,—or at most a very distant one not related to the stock to which he is introduced. He should bring with him every good point which the breeder has labored hard to produce in his stock; and if possible some improvement; and especially where the old stock may have been somewhat deficient; and most certainly he should have no manifest defect of form, and that most essential of all qualifications, a hardy constitution should not be wanting." R. W. S.

Mulberry and Beet Sugar.

We have received a communication from a highly esteemed friend, expressing his belief in the success of cultivating the Mulberry by the new and improved method of cultivation,—that a friend of his who has investigated the subject, and is most confident that the Chinese Mulberry may be *so managed* in this climate as to withstand the cold of winter, that he has made a purchase of 10,000 of the Morus Multicaulis for planting this spring.

Our friend highly recommends the new discovered method of making Beet Sugar, by a very simple and easy process, that the fixtures, even for a *large establishment*, would not be more expensive than for making maple sugar,—that there will be no difficulty in any family making their own sugar with the ordinary kitchen furniture.

Our friend advises us that he has forwarded a small parcel of Sugar, made according to the French method, and we very much regret that the Sugar has not reached the Offiee of the. INSPECTOR.

[*Northampton Courier.*]

Small's Plough.

We have seen this plough in operation, under the management of two excellent ploughmen, who fully concur with us in opinion, that it is constructed on an excellent model, that it performs its work fast and well, promises to be durable, is of easy draught, and, what is a matter of some consideration, is moderate in price,—it being sold at the factory, in Argyle, Washington county, at $8, and in Albany at $9—two extra points for $1 additional. It hss been brought to its present improved state by Mr. Wm. Small, an experienced and intelligent Scotch ploughman. It is for sale by W. Thorburn and J. H. Loucks, in Albany, and by Mr. Small in Argyle. We can with confidence recommend it as an excellent implement.—*Cultivator.*

Lime for Wheat.

Dr. Jackson, geologist of the state of Maine, remarks —"I find by chemical examination of sveral remarkable soils, that a very minute quantity of carbonate of lime, viz. from one to two per cent, is amply sufficient to render them capable of bearing heavy crops of good wheat. I am also satisfied that a soil is incapable of producing wheat of good quality if it does not contain carbonate of lime; for this substance is an essential ingredient of this grain."

"Work it Right."

AS there is but a poor prospect of a corn crop, every Farmer who 'works it right' will cultivate some more certain crop that will answer as a substitute.

PEAS will still succeed if sown without delay; the early Canada peas are the best.

CARROTS are excellent food for stock, and it is not yet too late to sow them. On deep rich light soil, with good cultivation, they will yield fifteen hundred bushels to the acre.

SUGAR BEETS AND MANGLE WURTZEL—these may also still be sown, and if the soil and season be favorable, an abundant crop may be obtained. The seed should be well soaked before sowing—and procured from the ROCHESTER SEED STORE, where all the above can be obtained of genuine quality. (June 2) REYNOLDS & BATEHAM.

Root Cultivation.

A LARGE supply of new and genuine Ruta Baga, Mangel Wurtzel, Sugar Beet and Orange Carrot Seed, just received at the Rochester Seed Store.

REYNOLDS & BATEHAM.

Rochester, April 21, 1838.

Drill-Barrows or Planting Machines.

A NEW supply of Robbins' Patent Planting Machines, just received at the Rochester Seed Store.

Also, a number of Merchants' Patent Drill Barrows. [See No. 18, current vol. of the Genesee Farmer.]

May 5. REYNOLDS & BATEHAM.

To the Dairy Women of our Country.

The undersigned, dealers in butter and cheese, would call the attention of the manufacturers of these articles in the middle and western part of this state, to the existence of general and just complaints in regard to the quality and condition of both butter and cheese made in such sections, together with the packages. In view of this fact, and to encourage an improvement that will restore and increase the reputation formerly enjoyed by producers of these articles, they would respectfully submit to their consideration, the following views, relative first to the manufacture of cheese:—In all cases, the milk and rennet should be perfectly sweet; as much of the animal heat should be evaporated from the milk as time will admit; when the curd is properly produced, break it up very fine, cook it well, but do not heat it so much as to start the oil in the curd; season it with clean fine salt, pure from lime; put the cheese in the press cool; press it hard, in order to extract all the whey from the middle before the outside closes tight; continue to press for two days; from the press put a dry cloth over it for a few hours, until a rhind is formed—then put on Annatto, dissolved in strong lye; cover again with cloth until next day; after the cloth is removed, put on a thick strong coat of melted bees-wax and lard, or butter; get a bright smooth surface, and keep one, by constant rubbing and turning, until the cheese is perfectly cured. When put in the casks, let it always be done in cool dry weather. All cheese should be slightly colored with Annatto in the milk, and such as do not exceed fifty pounds in weight, should be made a bright orange color—cheese of this description being generally in good demand for the southern markets. Finally, there should never be any late cheese. In no case should cheese be sent to market made after the 15th day of September, nor should it be sent even thus late, unless the utmost pains is taken with it, and unless well cured by a fire. It is of the greatest importance to the dairying interest, that these rules, in regard to late cheese, be strictly conformed to; for this kind of cheese not only destroys itself and greatly injures the market for a good article at the present time, but should the practice of making and sending it be persisted in, it will eventually destroy the business. To prevent any loss to the farmer, the undersigned would advise them to make butter after the 15th of September. Butter made after this time always commanding a fair price.

2nd. Of cheese casks.—They should be smoothly and well made of good seasoned wood, not less than half an inch in thickness for small casks, and five-eighths of an inch for large casks: the heads of all large casks should be at least five-eighths of an inch in thickness, to prevent them from springing; the staves should be narrow, in order to preserve their places and keep the cask round; there should be always a fair bilge, with at least eight good substantial hoops, (maple hoops should never be used;) the quarter hoops should never be put down so low on the casks as to allow the staves to spring out when the head hoops are taken off; the other hoops should all be securely nailed.

3rd. Of butter.—In all cases where it is made from cream, it should be churned before the delicious flavor is lost, or any bad flavor is induced; avoid too much heat in the process,* as this causes the butter to be soft, and of fine grain, bordening on a waxy character; never fail to extract every particle of milk before it is laid down; season it with rectified fine salt, or ground solar salt, and work in no more of it than will be entirely dissolved—where any of it is left undissolved, it destroys that delicate rosy flavor which renders the article most desirable, and its value diminishes in proportion to the excess of salt—this being one of the greatest objections to western butter.

4th. Of the packages.—The undersinged would recommend two kinds, viz. firkins and Welch tubs. The firkins should be made of seasoned white oak and walnut hoops. Where white oak is not to be had, they should be made of heart stuff of white ash, and hoops of white or black ash, or elm, of good shape, and perfectly smooth; have on at least ten good hoops, smoothly shaved; be perfectly tight, and contain 100 lbs. Welch tubs should be made of seasoned white ash, hooped with seven substantial split ash hoops, smoothly shaved, to contain 100 to 120 lbs. Both firkins and tubs should be soaked with a strong pickle, in order to saturate the wood before the butter is laid down, (but never put any salt at the bottom or on the top of the butter.) Great care should be taken to put it down solid; never fill the packages so full as to have the head or cover touch the butter, and always make a smooth surface on the top with the ladle. The tubs and firkins should be weighed, and the actual dry weight marked upon them with a marking iron in such a manner as not to be obliterated; and let them always be found accurate.

In conclusion the undersigned give it as their decided opinion, that the manufacturers of cheese and butter in the middle and western parts of this state, who will observe the above rules, and unite with the observance a desire to make their articles of the first quality, after a little experience, will soon be able to compete with any part of the United States, both in quality and prices, at home or abroad. Possessing, as these manufacturers undoubtedly do,—one of the finest soils, and best adapted to grazing of any in our country, they may produce the article in the greatest perfection. On this, as well as other accounts, the undersigned wish to impress upon their minds the importance of this subject, and that the course recommended is the only one which will secure to them the advantages of a fair price and good reputation for their labor and pains.

Leggett & Lapham,	Robert Nisbet,
Nathaniel Gordon,	Seth Miller,
Wm. H. Davenport,	Cook & Gage,
Burrell, Perry & Co.	Varnum S. Kinyon,
John Johnson & Son,	John P. Snell,
Gregory & Brown,	Curtis Easton & Co.
Walter Sutherland,	Nisbet & Husted,
Eleazer Mills,	Henry W. French,
P. Pidgeon, Broker,	Charles Stanton,
Abbey & Atwood,	Solomon Petree,
A. B. Meech & Co.	John J. Owens,
Smith, Howe & Palmer,	Ashley Devenport,
Stickney & Dean,	A. H. Buel,
Gove & Brown,	Henry Carter,
Charles F. Joy,	Chas. Stokes.

New-York, April 25th, 1838. [*Cultivator.*

Beet Sugar.

Citizens of various sections of the country are turning their attention to the subject of the cultivation of the Beet with the view to the manufacture of Sugar. A Company has lately been formed at White Pigeon, Michigan, with a capital of $50,000. The Gazette, printed at that place, in remarking upon the subject, holds the following language:

"Several of the best farmers in the country are now preparing their ground for the beet seed, and it is estimated that something like 30 acres will be put in this season, being all the seed the company were able to procure in time. This will yield 900 tons of the beets, calculated that at only 30 tons to the acre, but it is estimated that in Ohio upwards of 50 tons to the acre have been raised, and we maintain that the soil of Michigan is quite as productive as that of Ohio, or any other State in the Union, 900 tons of beets at the low estimate of 5 per cent., or 5 pounds of sugar to 100 pounds of beets, will give 90,000 pounds of sugar, 2,000 gallons of molasses, and about 100 barrels of vinegar. We have seen a specimen of the sugar made in this country by the manufacturing agent of the White Pigeon Beet Sugar Company. It is of good quality and of very pleasant flavor."

Notice.

THE subscriber takes the opportunity of informing the Agricultural public, that his *Imported English Draught Horse* SAMPSON, will stand for Mares this season, the four last days in each week, commencing the first week in 5th mo. at home, the next at Henry Stevenson's in Henrietta, and so alternately through the season, ending the 4th of 7th mo. He will call at any of the intermediate places where his services may be required.

SAMPSON is four years old this spring, a beautiful brown bay, free from white except a small star on the forehead; is 16 hands high, compact and well shaped, weighing 1640 lbs., possessing greater muscular power than any span of horses of the same age in this part of the country; is remarkably quiet and tractable, true in harness, a fast walker, and may safely be recommended as worthy of the notice of all who wish to improve the breed of Draught Horses.

SAMPSON was bred from some of the best stock of Draught Horses in the south of England, and was selected and imported (last fall) by the subscriber, with great care and expense, for the purpose for which he is now offered to the public. It is the decided opinion of many qualified judges, that a cross between the Draught Horse and the light, active Mares of this country, will produce a stock of horses better adapted to the general purposes of agriculture than any we now have.

All persons desirous to improve their stock of Team Horses are respectfully invited to call and see the above horse.

TERMS—$10 each colt, payable by the 1st of 3d mo. next. Old unlikely mares will not be covered, unless two dollars are paid at the time. All mares that are parted with after covering, to be considered with foal.

For further particulars apply to

JOHN ROBINSON.

Palmyra, Wayne Co., 4th mo. 26, 1838. my 26-3t

Early Red-blazed Seed Corn.

THIS variety of Indian Corn is very productive; the ears are of good size, and by experiments made the past season, it was found to ripen earlier than almost any other variety, not excepting the celebrated Dutton. It is for sale by

May 5 REYNOLDS & BATEHAM.

☞ Many other choice varieties for sale as usual.

Farmers' Books.

NOTICES on the Sugar Beet, containing a description of the culture and preservation of the plant; also explanations of the process of extracting its Sugar. Price 25 cts.

A Manual of the art of making and refining sugar from Beets. Price 75 cents.

Cobb's Manual on the Culture of Silk.
Chaptal's Agricultural Chemistry.
The Complete Farmer, by Fessenden.
Fessenden's American Gardener.
A Guide to Orchardists.
Smith's Treatise on the Honey Bee.
A Treatise on Cattle.
Mason's Farriery.
Burnum's American Farriery.
Vols. 1st and 4th, Genesee Farmer, bound.

For sale by D HOYT,

Rochester, May 26, 1838. Bookseller, 6 State st.

Siberian or Tartarian Oats.

A GOOD supply of this valuable variety of oats—a genuine article—for sale at the Rochester Seed Store.

The numerous accounts which have been published respecting the qualities of these Oats, render any further recommendation entirely superfluous, at least to the readers of the Genesee Farmer.

Dr. Wm. C. Dwight of Moscow, has raised them for several years, and thinks them decidedly preferable to any other variety. He recommends sowing them very thick, (from 3 to 4 bushels to the acre,) as it renders them less liable to lodge. They yield with him from 70 to 80 bushels to the acre.

May 5. REYNOLDS & BATEHAM.

Nursery for Sale.

A RARE chance is now offered for the purchase of a young NURSERY AND FARM at Covington, Ky., which fronts half a mile on the Licking River, within a mile of its junction with the Ohio, directly opposite to Cincinnati. The Nursery and Farm comprise 101 acres of the very richest Kentucky soil; about 50 acres are laid down to mowing; between 30 and 40 to tillage, including the Nursery, and from 12 to 15 acres are filled with timber for fencing and fuel. On the premises is an Orchard of 100 thrifty young apple trees, mostly winter fruit; was set out last year. Also, another Orchard of 200 pear trees, comprising 72 different sorts, including all the varieties of winter table pears, of which the demand for the New Orleans market is almost unlimited.

On the place is a good Brick House, built in 1816, with a first rate well of water, 45 feet deep, a large new Green House just finished, two large Barns, built in 1835, and all the usual out-houses—also, a Farm House, with two rooms that will let for $50 per annum, suitable for a gardener or small farmer.

The Nursery was laid out in 1835, and bids fair to do a very lucrative business, as there is nothing of the kind west of the mountains that can compete with it, for the variety and choice character of the fruits cultivated, which were all selected from the Nurseries of BUEL & WILSON and WM. KENRICK, and others, and comprise all the new sorts introduced by the Massachusetts Horticultural Society from Europe, and all the choice sorts cultivated near Boston; among them are 80 varieties of Pears, 50 of Apples, 50 of Peaches, 40 of Plums, 30 of Cherries, with a great variety of Grapes, Evergreens, Ornamental Shrubs, &c. &c. There are at least 100,000 seedlings of Apples, Pears, &c. of one and two years growth, for inoculation, now growing on the place.

The above offers a rare chance for one or two enterprising young men, to do a great business, in a perfectly healthy location, where there is little or no competition, and a demand for trees that has thus far exceeded the greatest expectations of its founders, and their ability to execute orders. It will be sold at a great bargain, on account of the death of the active partner of the concern, and the non-residence of the other.

For terms, apply (*post paid*) to S. C. PARKHURST, at Cincinnati, Ohio. May 19-4t

Fruit Trees for Sale.

THE subscriber respectfully informs his friends and the public that he has for sale at his Nursery in Rochester, Monroe county, state of New York, a large quantity of Fruit Trees, grafted and innoculated with the most approved kinds, now fit for transplanting, which he will sell on the most reasonable terms. SAMUEL MOULSON.

apr 15-tf

N. B CASH will be paid for a few thousand two years old APPLE TREES

Monroe Horticultural Garden & Nurseries, Greece, Monroe Co., N. Y.

THIS establishment now comprises over 20 acres, covered compactly with Trees and Plants in the different stages of their growth.

The subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Grape Vines, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, splendid Paeonies, Double Dahlias, &c. &c.

Also, a large collection of Green House Plants, of choice and select varieties, in good condition.

Orders respectfully solicited. Trees and Plants, when ordered, are carefully selected and faithfully packed, and if desired delivered on the canal one mile from the Nursery, or at Rochester.

Orders for Mr. Rowe's Nursery received by the publisher of this paper.

Catalogues will be sent to every applicant gratis, or may be had by calling at the office of the Genesee Farmer.

April 1, 1837. ASA ROWE.

* It has been found, that the *best* and *most* butter is obtained when the cream is about the temperature of 55°—and if the temperature is over 60°, the quality is inferior, and the quantity diminished. Hence, every dairy should have a thermometer.—*Cond. Cult.*